

REMARKS

I. STATUS OF THE CLAIMS

Claims 1-3, 5-22, and 24-56 are pending in this application. Claims 9-12, 15-17, and 33-43 were withdrawn from consideration by the Examiner.

Claim 24 was amended such that it depends from claim 1, instead of cancelled claim 23. Claim 44 was amended to recite that the coating recited in the claim is a resin compatible coating. No new matter has been added by these amendments nor do the amendments raise new issues or necessitate the undertaking of any additional search of the art by the Examiner.

Applicants acknowledge and appreciate that the Examiner has withdrawn the Section 103(a) rejection of claims 44, 46, and 51-56 over U.S. Patent No. 4,006,272 to Sakaguchi et al. ("*Sakaguchi*") in view of U.S. Patent No. 6,139,958 to Raghupathi et al. ("*Raghupathi*"). Further, Applicants acknowledge and appreciate that the Examiner has withdrawn the Section 103(a) rejection of claims 1-3, 5-8, 13-14, 18-32 and 44-56 over U.S. Patent No. 4,340,519 to Kotera et al. ("*Kotera*") in view of Raghupathi et al. Finally, Applicants acknowledge and appreciate that the Examiner has withdrawn the Section 103(a) rejection of claims 51-56 over U.S. Patent No. 5,689,601 to Hager et al. in view of "Concise Chemical and Technical Dictionary," 4th ed.

II. REJECTIONS UNDER 35 U.S.C. § 103(a)

A. Sakaguchi et al. over Quinn et al. in view of Inagaki

The Examiner has rejected claims 44, 46 and 51-56 under 35 U.S.C. § 103(a) as being unpatentable over U.S. Patent No. 4,006,272 to Sakaguchi et al. ("*Sakaguchi*"), in view of U.S. Patent No. 3,322,498 to Quinn ("*Quinn*") and JP 404238810A to Inagaki ("*Inagaki*") for the reasons disclosed on pages 3-4 of the Office Action dated December 1, 2005. Applicants respectfully traverse this rejection for at least the reasons that follow.

To establish a prima facie case of obviousness over a combination of references, the Examiner "bears the initial burden of factually supporting any prima facie conclusion of obviousness." *In re Fine*, 837 F.2d 1071, 1074 (Fed. Cir. 1988). Specifically, the Examiner must prove such a desire to combine references with "substantial evidence" that is a result of a "thorough and searching" factual inquiry. *In re Lee*, 277 F.3d 1338, 1343-1344 (Fed. Cir. 2002). The Federal Circuit has on numerous occasions stated that to establish a prima facie case of obviousness an Examiner must show that the references, taken alone or in combination, (1) teach all the present claim limitations; (2) would have suggested to or provided motivation for one of ordinary skill in the art to make the claimed invention; and (3) would have provided one of ordinary skill with a reasonable expectation of success in so making. See *In re Vaeck*, 947 F.2d 488, 493 (Fed. Cir. 1991) (citing *In re Dow Chemical Co.*, 837 F.2d 469, 473 (Fed. Cir. 1988)). "Both the suggestion and the reasonable expectation of success must be found in the prior art reference, not in the applicant's disclosure." *Id.* at 493.

1. The cited prior art does not teach all the present claim limitation.

In the present case, the rejection under § 103 is fatally flawed because the combination of *Sakaguchi*, *Quinn*, and *Inagaki* fail to teach the limitations of independent claims 44 and 51. Claim 44 recites, inter alia, “[a]n at least partially coated fiber strand comprising a plurality of fibers, the coating comprising . . . a plurality of discrete lamellar particles” Claim 51 recites, inter alia, “[a]n at least partially coated fiber strand comprising a plurality of glass fibers having a resin compatible coating composition . . . comprising: . . . a plurality of discrete lamellar, inorganic particles. . . .” Applicants note that in both instances, a plurality of *discrete lamellar* particles is claimed.

Sakaguchi teaches a powder of “inorganic silica particles.” See Office Action dated December 1, 2005, at 3. Conspicuously absent from *Sakaguchi* is any discussion of discrete lamellar particles, as recited in independent claims 44 and 51 of the present invention. Indeed, the Examiner acknowledges this fact by stating that “*Sakaguchi* does not specifically identify his silica particles as ‘lamellar particles.’” *Id.*

Nothing in *Quinn* or *Inagaki* correct the deficiencies in *Sakaguchi*. As discussed in Applicants’ August 5, 2005, response, incorporated by reference herein in full, lamellar particles are “composed of sheets or plates of atoms in hexagonal array, with strong bonding within the sheet and *weak van der Waals bonding between sheets*....” As-filed Specification, page 16, lines 21-32 (citations omitted). Such weak bonding allows the bonds holding the sheets together to easily break, resulting in parallel movement of sheets along a plane surface. RICHARD V. DIETRICH AND BRIAN J. SKINNER, ROCKS AND ROCK MINERALS 46-47 (1979). Silica particles, on the other hand, are

tetrahedral compounds in which all bonds possess the same strength. See CHARLES C. PLUMMER AND DAVID MCGEARY, PHYSICAL GEOLOGY 36-37 (3rd ed. 1985) (“A mineral tends to break along certain planes because the bonding between atoms is weaker there. In quartz [which is composed of silica particles], the bonds are equally strong in all directions; therefore quartz has no cleavage.”). The result is that silica particles are not lamellar.

There is no mention of individual particles in *Inagaki*. Rather the references discloses a “layered silica metal oxide porous body.” The porous body has “interlayer crosslinked SiO₂ formed between layer crystal of silicon tetrahydram....” Inagakai, at 1. Such crosslinking with SiO₂ results in a *covalent* bond between the layers as the Si atoms *share* electrons. Cf. RICHARD V. DIETRICH AND BRIAN J. SKINNER, ROCKS AND ROCK MINERALS 28 (1979) (stating that quartz, which is composed of SiO₂ molecules, “shar[e] all four oxygens” that make up silica tetrahedra). Covalent bonds are far stronger than weaker van der Waals bonds and, as a result, does not result in parallel movement of the porous body taught in *Inagaki*. See THEODORE BROWN, H. EUGENE LEMAY, JR., AND BRUCE BURSTEN, CHEMISTRY: THE CENTRAL SCIENCE 367-68 (5th ed. 1991).

Likewise, nothing in *Quinn* corrects the deficiencies found in *Sakaguchi*. *Quinn* involves the growth of silica crystals at a gas-liquid interface. *Quinn*, col. 2, lines 8-11. Specifically, the silica crystals in *Quinn* are formed by precipitating silica molecules from an aqueous solution circumferentially into the skin of a surfactant bubble. *Quinn*, col. 2, lines 13-22. The result is a spherical silica crystal composed of a single layer of silica molecules. *Id.*, col. 2, lines 22-26 (“A crystal of silica can readily grow circumferentially of a foam bubble”). However, the silica crystals are limited in thickness since “crystal

growth in the radial direction is . . . limited,” resulting in silica particles “whose thickness is less than the bubble’s skin.” *Id.*, col. 2, lines 45-49. Nowhere is there any mention of crystals exhibiting multiple layers or sheets with van der Waals bonding between the sheets. Accordingly, *Quinn* also fails to teach particles that possess a lamellar structure, as described in the present invention.

Therefore, Applicants respectfully submit that *Sakaguchi*, *Quinn*, and *Inagaki* fail to teach the presence of a plurality of discrete lamellar particles.

2. There is no suggestion or motivation for one in the art to make the claimed invention

Moreover, Applicants submit that the Examiner cannot demonstrate a suggestion or motivation to modify the teachings of the references to make the claimed invention. Specifically, Applicants submit that the Examiner’s proposed combination fails to take into account the disparate teachings of the references.

First, the binder resin utilized in preparing the mats in *Sakaguchi* is a styrene resin or a copolymer composed mostly of styrene, or a mixture of said styrene resin or copolymer with an unsaturated polyester resin to which “a higher fatty acid metal salt or finely divided silica *can* be added as a lubricant.” See *Sakaguchi* at Abstract and Summary of Invention; see also *id.*, col. 4, lines 5-8 (emphasis added). The absorbing agent taught in *Inagaki* is composed of silicon tetrahydron, a metal ion different from silica, and salt of a different metal from silicon. See *Inagaki* at Abstract. *Quinn* consists of water, sodium silicate, an acid, and a surfactant. *Quinn*, col. 2, lines 12-15; see also *id.*, Examples 1-5 (compositions contain aforementioned components).

Second, *Sakaguchi* teaches a process for preparing resin-impregnated glass fiber mats in which the binder resin dissolves rapidly in vinyl monomers. *Sakaguchi*, col. 1, lines 7-10. Inagakli, on the other hand, teaches a process for preparing a porous body consisting of a silica metal oxide layers. See *Inagaki*. The process in *Quinn* involves creating thickening agents with "improved oil absorption, thixotropicity and other properties." See *Quinn*, col. 1, lines 9-15 and lines 33-35.

Third, the mats prepared in *Sakaguchi* are used "as reinforcements for fiber-reinforced plastics (FRP) or transparent laminates." *Sakaguchi*, col. 1, lines 12-13 and col. 5, lines 18-20. The porous body in *Inagaki* is used as an adsorbing agent or as a cracking catalyst. See *Inagaki* at Abstract. *Quinn* is drawn to preparing "lay-up molding and patching work[,] . . . grease of the kind employed in automotive differential gears . . .[,] paint, plaster, caulking and sealing components." *Quinn*, col. 6, lines 48-49 and 65-69.

Sakaguchi, *Inagaki*, and *Quinn* are therefore directed to the use of **different** chemicals in **different** processes for **different** purposes to obtain **different** products. Applicants submit that one of ordinary skill in the art reading these three references would not have been motivated to combine their divergent teachings.

Accordingly, Applicants submit that there is no evidence of record to establish that all of the claim limitations are met upon modifying/combining the references' teachings, as per M.P.E.P. § 2143.03. Further, Applicants submit that there is no evidence of record to establish a motivation to modify the teachings of *Sakaguchi* or combine the reference with the teachings of *Inagaki* and *Quinn* to correct its deficiencies, as per M.P.E.P. § 2143.01.

As a result, Applicants respectfully submit that the Examiner has failed to establish a prima facie case of obviousness, and respectfully request that the Section 103 rejections of claims 44, 46, and 51-56 be withdrawn.

B. Kotera et al. in view of Toyooka

The Examiner has additionally rejected claims 1-3, 5, 13, 14, 18-22, 24-32, and 44-56 under 35 U.S.C. § 103(a) as being obvious over U.S. Pat. No. 4,340,519 to Kotera et al. ("*Kotera*") in view of U.S. Pat. No. 3,506,526 to Toyooka ("*Toyooka*"). Applicants submit that a prima facie case of obviousness has not been established because the Examiner has not shown that *Kotera* and *Toyooka*, in combination, meet the requirements for a rejection under Section 103(a).

In this case, the Examiner fails to present substantial evidence on the three prongs necessary for a proper rejection under Section 103(a). First, neither the proposed combination of *Kotera* and *Toyooka*, nor the evidence of the knowledge of one skilled in the art, teaches or suggests all the claim limitations. Second, there is no evidence of a suggestion or motivation that would prompt a person of ordinary skill in the art to combine *Kotera* and *Toyooka* to arrive at the present invention. Third, there is no evidence of a reasonable expectation of success that would result from a person of ordinary skill in the art combining *Kotera* and *Toyooka*. Moreover, "[i]t is improper to combine references where the references teach away from the proposed combination." See, e.g., M.P.E.P. § 2145.

1. Claims 1-3, 5, 13, 14, 18-22, 24-32, and 44-56

- a. The cited prior art does not teach all the present claim limitations

Applicants first respectfully submit that the rejection under § 103 is fatally flawed because the combination of *Kotera* and *Toyooka* fails to teach all of the limitations of independent claims 1, 44, and 51. Claim 1 recites “[a]n at least partially coated fiber strand comprising a plurality of fibers having a resin compatible coating composition on at least a portion of a surface of at least one of the fibers, . . . wherein the at least one fiber strand comprises at least one glass fiber.” Claim 44 recites “[a]n at least partially coated fiber strand comprising a plurality of fibers having a resin compatible coating composition on at least a portion of a surface of at least one of the fibers,. . . wherein the at least one fiber strand comprises at least one glass fiber.” Claim 51 recites “[a]n at least partially coated fiber strand comprising a plurality of glass fibers having a resin compatible coating composition on at least a portion of a surface of at least one of the glass fibers”

As stated in Applicants’ August 5, 2005, response, incorporated by reference herein in full, there is no mention of a fiber strand comprising at least one glass fiber having a resin compatible coating composition in *Kotera*. The Examiner emphasizes this fact by stating that *Kotera* does not contain any mention of glass fibers and, consequently, no mention of resin compatible coated glass fibers. Office Action dated December 1, 2005, at 5; see *also* Office Action dated July 2, 2004, at 6 (“*Kotera* does not specifically teach glass fibers of the type contemplated by applicants....”).

Applicants assert that *Toyooka* does not remedy the deficiencies of *Kotera*.

Toyooka expressly teaches a transparent panel structure composed of a woven fabric of glass and metal filaments embedded into a transparent resin material. *Toyooka*, col. 1, lines 15-19 and col. 2, lines 6-12. Absent from *Toyooka*, however, is a teaching that the filaments are coated with a resin compatible coating composition. As is readily known by one skilled in the art, resin compatible coatings do not require removal prior to incorporation into a matrix material. See as-filed application, page 3, lines 15-21.

Although *Toyooka* discloses a binder material that adheres to the surface of the glass fibers to assist in the yarn spinning, the “binder must be burnt away by subjecting it to heat because adhesion of the binder on the glass fiber surface results in difficulty of obtaining the desired [characteristics] of the transparent resin material into which the glass fiber fabric is to be embedded.” *Toyooka*, col. 4, lines 28-38; see also col. 2, lines 1-12. As a result, *Toyooka* also fails to teach or suggest the existence of an at least partially coated glass fiber strand having a resin compatible composition on at least a portion of the surface of at least one fiber.

Accordingly, both *Kotera* and *Toyooka* fail to teach all the present claim elements.

b. There is no suggestion or motivation for one of skill in the art to make the claimed invention

The Federal Circuit has noted that the Examiner's burden to establish a motivation to combine or modify is provided by an objective teaching found in the prior art. Although the Examiner states that when *Kotera* and *Toyooka* are combined they render the present invention obvious, the Examiner has failed to make a factual inquiry specifically utilizing the objective evidence of record. Upon making such an inquiry, it is

found that there is no motivation to make the proposed combinations at the time the invention was made. Indeed, an examination of the entire disclosure in *Toyooka* leads one of skill in the art away from a combination with *Kotera*.

First, *Kotera* is drawn to preparing an aqueous dispersion of polyester resin, comprising a crystalline polyester, a non-crystalline polyester, a water-soluble organic compound, and water. See *Kotera* at Abstract. *Toyooka*, on the other hand, discloses a transparent panel structure consisting of woven glass and metal filaments, wetted with liquid such as styrene monomer, and a transparent resin material. See *Toyooka*, col. 2, lines 2-12.

Second, as discussed in Applicants' December 2, 2004, response and Applicants' August 5, 2005, response, both incorporated herein by reference, *Kotera* teaches that the resin gives an *external* coating layer. See, e.g., *Kotera* at Abstract and col. 2, lines 9-12. The woven fabric disclosed in *Toyooka*, however, is wetted with a liquid that permeates *into* the glass fibers. *Toyooka*, col. 4, lines 49-54.

Third, as discussed in Applicants' December 2, 2004, and August 5, 2005, responses, *Kotera* is drawn to preparing a resin dispersion to externally treat plastic and glass products, such as "horticultural house, materials for window, lens, or the like." *Kotera*, col. 9, lines 45-47. Such a coating provides the coated products with excellent water resistance and weatherability. See *Kotera* at Abstract and col. 2, lines 9-12. *Toyooka*, on the other hand, is drawn to a process that creates transparent panel structures. See, e.g., *Toyooka* at Abstract and claim 1. To maximize their transparency, such structures do not have an external coating applied to them. See, e.g., *id.* at 27-39; see also *id.* at col. 4, lines 45-49.

Kotera and *Toyooka* are therefore directed to the use of **different** materials in **different** methods for **different** purposes to obtain **different** products. Applicants therefore submit that one of ordinary skill in the art reading these two references would not have been motivated to combine their divergent teachings as proposed by the Examiner. Accordingly, for at least this reason, Applicants submit that the Examiner has failed to demonstrate a prima facie case of obviousness.

2. Claim 18

As with independent claims 1, 44 and 51, the Examiner has not met the burden for establishing a prima facie case of obviousness for claim 18. Specifically, in regard to claim 18, the Examiner states that “the woven fabric implies some degree of bending of the strands. One would *reasonably presume* that said bending would result in some degree of spacing, even if only due to some filament breakage. A coating applied thereto would result in integrating within said spaces and the deposition of the coating and particles within the interstices.” Office Action dated December 1, 2005, at 6 (emphasis added). The Examiner further maintains that “Example 25 [of *Kotera*] teaches titanium dioxide and POLYFLOW which are discrete particles.” *Id.*

In making this rejection, the Examiner does not cite to any supporting documentary evidence, either from the record or from statutory sources, and, instead, makes broad, conclusory statements which require one of ordinary skill in the art to make unwarranted assumptions about interstitial spacing and the properties of particles. However, the Federal Circuit has stated that “[m]ere . . . conclusory statements . . . are not sufficient to establish a genuine issue of material fact.” *McElmurry v. Arkansas Power & Light Co.*, 995 F.2d 1576, 1578 (Fed. Cir. 1993). Since the Examiner has not

provided any justification or support for such arguments, Applicants submit that the Examiner has failed in the duty to adequately support the Examiner's conclusion and has failed to make a prima facie showing of obviousness. See M.P.E.P. § 2144.03.

Accordingly, the rejection under Section 103 of claim 18 is in error and should be withdrawn.

C. Kotera et al. over Toyooka in view of Raghupathi

The Examiner has also rejected claims 6-8 under 35 U.S.C. § 103(a) as being unpatentable over *Kotera* in view of *Toyooka* and further in view of U.S. Pat. No. 6,139,958 to Raghupathi et al. ("*Raghupathi*") for the reasons disclosed on pages 6-7 of the Office Action dated December 1, 2005. Applicants respectfully submit that a prima facie case of obviousness has not been established because the Examiner has not shown that *Kotera*, *Toyooka*, and *Raghupathi*, in combination, meet the requirements for a rejection under Section 103(a).

As discussed above and incorporated by reference herein in full, *Kotera* and *Toyooka* fail to teach or suggest all the limitations of independent claim 1 and, as a result, the claims dependent thereon. Specifically, the references fail to teach a fiber strand coated with a resin compatible coating. As stated in the rejection, the Examiner relies upon *Raghupathi* only to assert that "[i]t would have been obvious to modify the combined teachings of *Kotera* and *Toyooka* by using as the glass fibers E-glass or E-glass derivatives to result in panels/windows that have great transparency." Office Action dated December 1, 2005, at 7.

This does not correct the deficiencies of *Kotera* and *Toyooka* as discussed above. Accordingly, Applicants submit that this rejection is improper under M.P.E.P. § 2143.03 and respectfully request that it be withdrawn.

D. Hager et al. over CONCISE CHEMICAL AND TECHNOLOGICAL DICTIONARY in view of Girgis

The Examiner has rejected independent claim 1 and claims 2, 3, 5-8, 18-22, and 24-32 that depend therefrom under 35 U.S.C. § 103(a) as being obvious in view of U.S. Pat. No. 5,689,601 to Hager et al. ("*Hager*") in view of CONCISE CHEMICAL AND TECHNOLOGICAL DICTIONARY 447, 689 (4th ed. 1986) ("*dictionary*") for the reasons of record, and further in view of U.S. Pat. No. 5,925,462 to Girgis ("*Girgis*") for the reasons disclosed on pages 7-9 of the Office Action dated December 1, 2005. Applicants respectfully submit that a prima facie case of obviousness has not been established at least because the Examiner has not shown that *Hager*, *dictionary*, and *Girgis*, in combination, meet the requirements for a rejection under Section 103(a). Specifically, the cited references do not teach, as cited in relevant part in claim 1:

- a resin compatible coating composition . . .
comprising:
 - (a) a plurality of discrete particles . . .;
 - (b) at least one lubricious material different from the plurality of discrete particles, wherein the at least one lubricious material comprises from 1 to 50 weight percent of the resin compatible coating composition on a total solids basis; and
 - (c) at least one film-forming material

In the Office Action dated December 1, 2005, the Examiner asserts that "*Hager* and *dictionary* are as applied previously." *Id.* at 7. As demonstrated in Applicants' August 5, 2005, response, incorporated by reference herein in full, *Hager* and *dictionary*

fail to disclose a lubricious material comprising from 1 to 50 weight percent of the resin compatible coating on a total solids basis. Office Action response dated August 5, 2005, at 22. The Examiner highlights this fact by stating in the present Office Action that "Hager does not specifically teach that the lubricious particle material comprises from 1 to 50 weight percent of the resin coating on a total solids basis." Office Action dated December 1, 2005, at 7

As a result, the Examiner cites to *Girgis* to correct this omission. Specifically, the Examiner states that "Girgis teaches the presence of at least one lubricious material in the amount of about 1 to about 10 weight percent of the coating on a total solids basis, which is within the applicants' range." Office Action dated December 1, 2005, at 8. Furthermore, the Examiner states that "[i]t would have been obvious to modify the composition of Hager by incorporating the lubricant in his composition in an amount of 1% by weight of the coating on a total solids basis . . . [as] taught by Girgis . . . in order to enhance processing of the glass fibers and strand." *Id.*

Applicants assert that *Hager*, *dictionary*, and *Girgis* expressly teach away from their combination. *Hager* teaches two separate coatings that are applied to glass fiber strands. *Hager* at abstract and claim 1. The first coating contains a binding agent and the second coating contains "particles of a water blocking agent." *Id.* The Examiner indicates that "Hager teaches that the lubricious material can be . . . [a] paraffin wax emulsion." However, when examined closely, the paraffin wax emulsion in *Hager* functions as a binding agent. *Hager*, col. 2, lines 64-65; col. 4, lines 37-45; *see also* claim 4. The binding agent functions to "*firmly adhere* the particles of water blocking agent to the glass fiber strand" *Id.*, col. 3, lines 8-10 (emphasis added); *see also*

col. 4, lines 27-31. Clearly, the wax in *Hager* clearly does not function as a lubricious material.

An examination of the entire disclosure in *Girgis* leads one of skill in the art away from a combination with *Hager*. *Girgis* discloses a secondary aqueous coating composition for coating sized glass fibers. *Girgis* at abstract and claim 1. Furthermore, *Girgis* discloses that a wax material can be included in the coating. See *Girgis*, col. 9, lines 40-59. However, unlike *Hager*, the wax in *Girgis* functions as a lubricant. *Id.*, col. 11, 17-18. Such a teaching in *Girgis* clearly would lead on skilled in the art away from the combination of this reference with *Hager*, where the wax is utilized in a binder resin to prevent movement, as opposed to enhancing it. See MERRIAM-WEBSTER, INC. COLLEGIATE DICTIONARY 690 (10th ed. 2001) (defining lubricant as “a substance (such as grease) capable of reducing friction....”); see also *id.* (defining lubricious as “having a smooth or slippery quality”).

Dictionary does not act to rectify this discrepancy.¹ For at least this reason, the teachings of *Hager*, *Girgis*, and *dictionary* cannot be combined in the manner proposed by the Examiner, and Applicants respectfully submit that the Examiner has failed to make a prima facie showing of obviousness with respect to claims 1-3, 5-8, 18-22, and 24-32. Accordingly, these rejections under Section 103 are in error and should be withdrawn.

¹ The sole reason the Examiner cites to *dictionary* is to establish that “an acrylic latex comprises discrete particles.” Office Action dated December 1, 2005, at 7.

E. Girgis

The Examiner has also rejected independent claim 1 and claims 2, 3, 5-8, 18-22, and 24-32 that depend therefrom under 35 U.S.C. § 103(a) as being obvious in view of *Girgis* for the reasons disclosed on pages 9-10 of the Office Action dated December 1, 2005. Applicants respectfully submit that a prima facie case of obviousness has not been established because the Examiner has not shown that *Girgis* meets the requirements for a rejection under Section 103(a).

The Examiner states that *Girgis* "teaches an at least partially coated fiber strand comprising a plurality of fibers having a coating composition on at least a portion of a surface of at least one of the fibers, wherein the coating composition comprises a plurality of discrete particles, at least one lubricious material different from said plurality of discrete particles, a film former and wherein the plurality of fibers are glass fibers of the type contemplated by applicants." Office Action dated December 1, 2005, at 9-10. Upon inspection, however, *Girgis* does not teach all the claim limitations.

Contrary to the Examiner's argument, *Girgis* teaches a secondary coating that consists of (1) a water soluble, emulsifiable or dispersible curable acrylic polymer; and (2) a wax material. Whereas the Examiner claims that *Girgis* teaches a plurality of discrete particles as claimed in the present invention, in reality the only mention of discrete particles in *Girgis* is when describing acrylic and urethane-containing polymers. See, e.g., col. 3, lines 6-8. Both acrylic polymers and urethane-containing polymers consist of organic compounds. See HAWLEY'S CONDENSED CHEMICAL DICTIONARY 18 (14th ed. 2001) (defining acrylic polymers as "[t]hermoplastic polymers or copolymers of acrylic acid, methacrylic acid, esters of those acids, or acrylonitrile," which are organic

compounds); *cf. Girgis*, col. 7, lines 14-22 (showing the organic structure of urethane-containing polymers). Acrylic and urethane-containing polymers, however, are not claimed in the present invention. The present invention claims particles formed from, *inter alia*, *inorganic* polymeric materials.

Since *Girgis* does not teach all the limitations of claims 1-3, 5-8, 18-22, and 24-32, Applicants assert that the rejection under Section 103 is improper and respectfully request that it be withdrawn.

III. DOUBLE PATENTING

Claims 51 and 52 are rejected on the ground of nonstatutory obviousness-type double patenting as being unpatentable over claims 1-3 and 19 of U.S. Patent No. 6,949,289 B1 ("the '289 patent") for the reasons set forth on pages 10 and 11 of the Office Action dated December 1, 2005.

In an attempt to advance prosecution of this application, Applicants submit herewith a Terminal Disclaimer rendering this rejection moot. Applicants respectfully request entry of the Terminal Disclaimer and withdrawal of this rejection.

IV. CONCLUSION

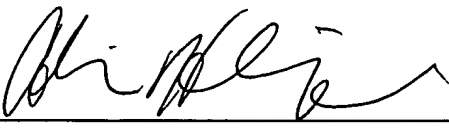
In view of the foregoing amendments and remarks, Applicants respectfully request reconsideration of this application and the timely allowance of the pending claims.

Please grant any extensions of time required to enter this response and charge any additional required fees to our Deposit Account No. 06-0916.

Respectfully submitted,

FINNEGAN, HENDERSON, FARABOW,
GARRETT & DUNNER, L.L.P.

Dated: May 1, 2006

By: 
Colin C. Heitzmann
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Attachments:

- 1) RICHARD V. DIETRICH AND BRIAN J. SKINNER, ROCKS AND ROCK MINERALS 28, 46-47 (1979)
- 2) CHARLES C. PLUMMER & DAVID McGEARY, PHYSICAL GEOLOGY 27, 36-37 (3rd ed. 1985)
- 3) MERRIAM-WEBSTER, INC. COLLEGIATE DICTIONARY 690 (10th ed. 2001)
- 4) RICHARD J. LEWIS, SR., HAWLEY'S CONDENSED CHEMICAL DICTIONARY 18 (14th ed. 2001)
- 5) THEODORE BROWN, H. EUGENE LEMAY, JR., AND BRUCE BURSTEN, CHEMISTRY: THE CENTRAL SCIENCE 367-68 (5th ed. 1991)